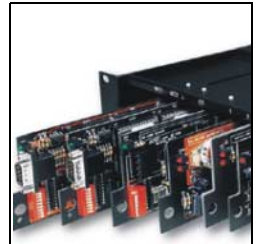




instruction manual

TXC+ Transmitter Series



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Product Information

Through the use of infrared (IR) or radio frequency (RF) transmission mediums, the TXC+ hand-held wireless transmitters control a wide variety of devices connected to an AMX Axxess Control System. These transmitters include the TXC4+, TXC4L+, TXC16+, and TXC32+. For these units IR, signals are transmitted at 38 kHz or 455 kHz and RF signals at 418 MHz.

The TXC4+ is a four-pushbutton transmitter (FIG. 1) and the TXC16+ transmitter is a 16-pushbutton configuration (FIG. 2).

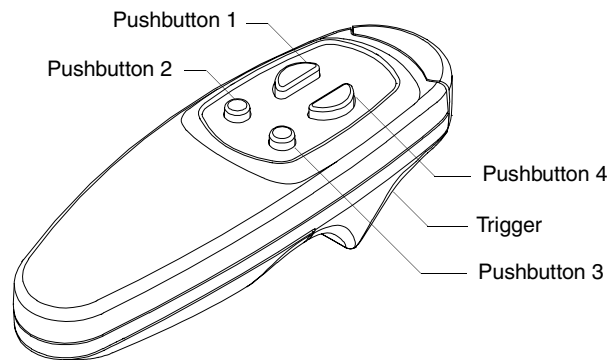


FIG. 1 TXC4+ series transmitter

Each pushbutton performs a specific operation according to the Axxess software program in your AMX Control System. The red transmission LED, located in the top-center of the TXC16+ and TXC32+ transmitters, flashes when you press one of the pushbuttons, indicating that an RF or IR signal is being transmitted.

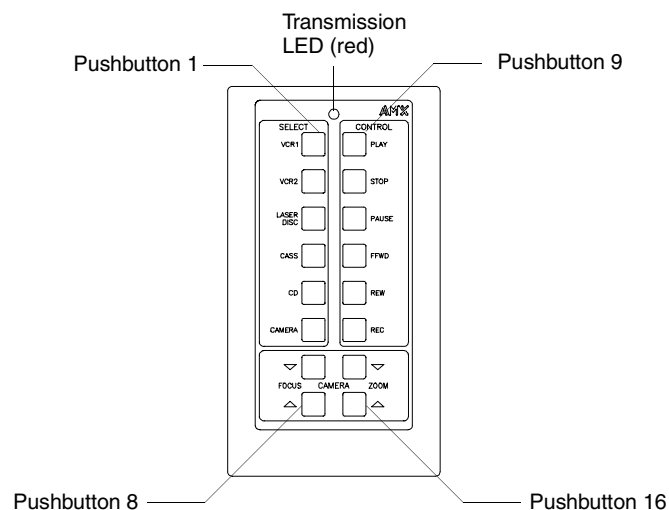


FIG. 2 TXC16+ transmitter

The TXC32+ (FIG. 3) provides up to 48 programmable pushbuttons. The number of pushbuttons varies depending on the overall system design.

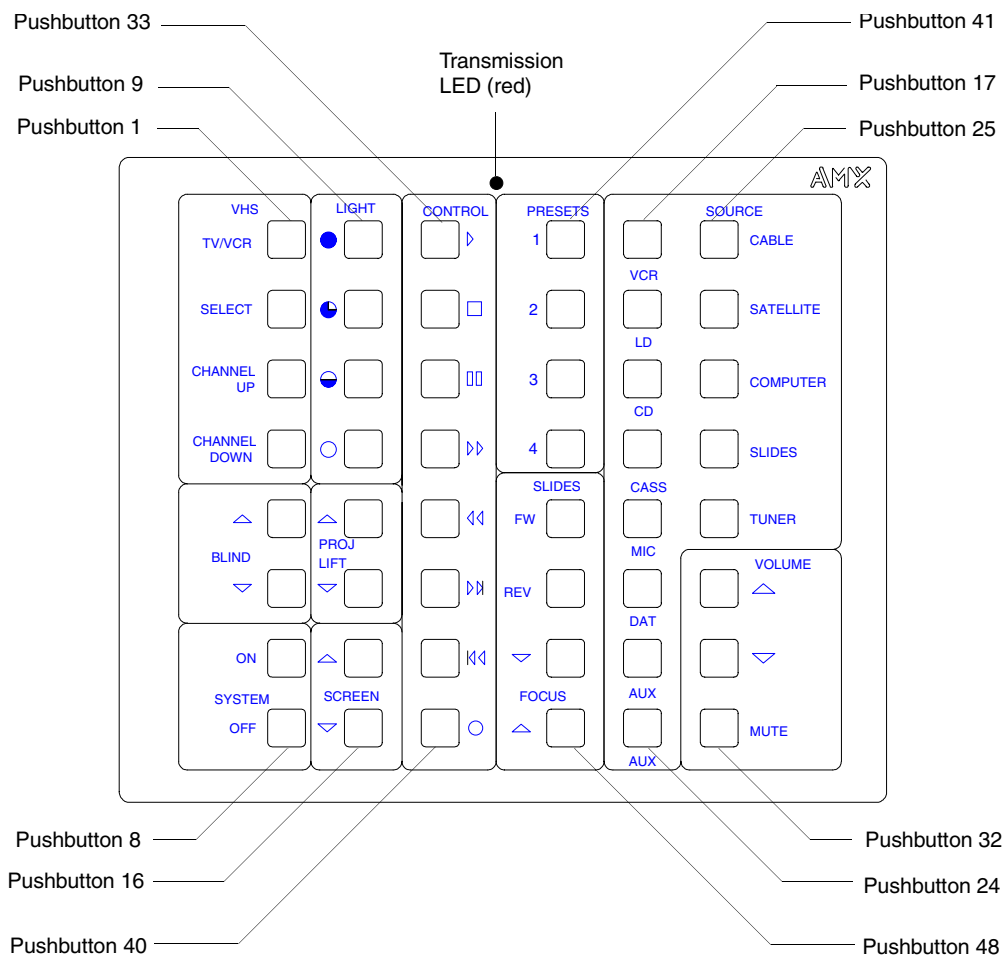


FIG. 3 TXC32+ transmitter example

Specifications

The specifications for the TXC4+ series are listed in the table below.

TXC4+ Series Specifications	
Dimensions (HWD)	5.40" x 1.80" x 1.50" (13.72 cm x 4.57 cm x 3.81 cm)
Weight	
TXC4+	3.10 oz (87.90 g)
TXC4L+	3.30 oz (93.60 g)
Enclosure	Molded black matte plastic (all models)
Engraved overlay	Available colors: black (blank), white, brass, gray, and silver
Power	3.0 VDC (two AAA alkaline batteries - supplied for all models)
Pushbuttons	Up to 4 pushbuttons and a trigger
Transmission Frequencies:	
IR	38 kHz or 455 kHz (<i>optional international frequencies available</i>)
RF	418 MHz standard (<i>optional frequencies available</i>)
DIP switch	10-position sets IR or RF mode, radio code, and IR frequency

TXC4+ Series Specifications (Cont.)

Options	• Custom logos • Color text and borders on engraved overlay • Alternate radio frequencies • Multiple engraved overlay colors available
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The TXC16+ specifications are listed in the table below.

TXC16+ Specifications

Dimensions (HWD)	5.20" x 2.80" x 0.75" (13.34 cm x 7.11 cm x 1.91 cm)
Weight	4.00 oz (113.4 g) with batteries
Enclosure	Molded black matte plastic
Engraved overlay	Available colors: black (blank), white, brass, gray, and silver
Power	3.0 VDC (two N-size, 1.5-volt alkaline batteries - supplied)
Pushbuttons	Up to 16 black, gray, and/or white
Transmission Frequencies:	
IR	38 kHz or 455 kHz (<i>optional international frequencies available</i>)
RF	418 MHz standard (<i>optional frequencies available</i>)
DIP switch	10-position sets IR or RF mode, radio code, and IR frequency
LED	Red LED indicator for signal transmission
Options	• Custom logos • Color text and borders on engraved overlay • Alternate radio frequencies • Multiple engraved overlay colors available

The TXC32+ specifications are listed in the following table.

TXC32+ Specifications

Dimensions (HWD)	5.20" x 6.20" x 0.75" (13.34 cm x 15.88 cm x 1.91 cm)
Weight	9 oz (255 g) with batteries
Enclosure	Molded black matte plastic
Engraved overlay	Available colors: black (blank), white, brass, gray, and silver
Power	6.0 VDC (four N-size, 1.5-volt alkaline batteries - supplied)
Pushbuttons	Up to 48 black, gray, and white
Transmission Frequencies:	
IR	38 kHz or 455 kHz (<i>optional international frequencies available</i>)
RF	418 MHz standard (<i>optional frequencies available</i>)
DIP switch	10-position sets IR or RF mode, radio code, and IR frequency
LED	Red LED indicator for signal transmission
Options	• Custom logos • Color text and borders on engraved overlay • Alternate radio frequencies • Multiple engraved overlay colors available

Battery Replacement

TXC4+ and TXC4+L batteries

The TXC4+ line of hand-held wireless transmitters have identical battery placement areas. Remove the access cover on the back of the transmitter and replace the two AAA batteries. Under normal conditions, battery life will exceed 1 year. Use alkaline batteries for long battery life and optimum performance.

TXC16+ batteries

Remove the access cover on the back of the TXC16+ transmitter and replace the two 1.5-volt, "N" size batteries. Under normal conditions, battery life will exceed 2 years. Use alkaline batteries for long battery life and optimum performance.

TXC32+ batteries

Remove the access cover on the back of the TXC32+ transmitter and replace the four 1.5-volt, "N" size batteries. Under normal conditions, battery life will exceed 2 years. Use alkaline batteries for long battery life and optimum performance.

OLDesign Overlay Engraving Design Software Program

The AMX OLDesign software program is a Windows™-based design tool that you use to create panel overlays, pushbutton names, and pushbutton operation descriptions. The operation descriptions are used when the Axxess operating software is programmed. OLDesign also contains an online help system that describes how to produce custom overlay designs and pushbutton descriptions, and then store them on your computer. FIG. 4 shows the OLDesign main window and a sample TXC32+ overlay design. Refer to the *OLDesign Overlay Design Program* instruction manual for command instructions that can be used with the OLDesign online help system.

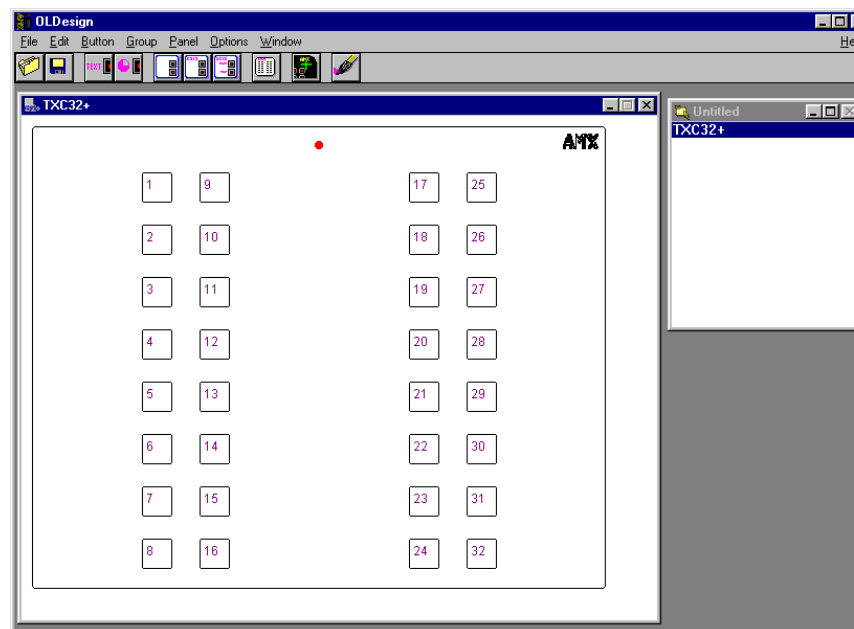


FIG. 4 OLDesign main window

IR, IR Frequency, RF, and Radio Code Settings

The TXC+ series transmitters transmit IR or RF signals, according to how you set positions 1, 2, and 3 on the 10-position DIP switch (FIG. 5) located under the battery cover.

IR, IR Frequency, and RF Settings

FIG. 5 shows the DIP switch settings for IR and RF modes. The transmitter can only be configured for either IR or RF, not both.

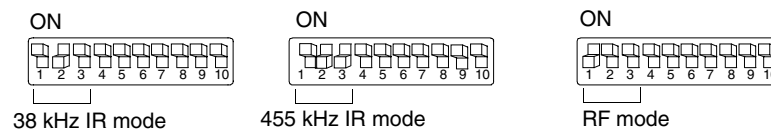


FIG. 5 DIP switch settings for IR and RF modes



CAUTION

Do not set both DIP switch positions 1 and 2 to the ON position, or the batteries may prematurely lose power.

Radio Code

Each pushbutton on your transmitter represents an Axxcess channel number. All of the pushbuttons on a transmitter represent a group of channel numbers. This grouping is known as a radio code. After the radio code is set on the transmitter, each button you press sends a specific channel number to the control system. For example, if your TXC+ transmitter is set to radio code 4 and you press button 1, channel number 64 is sent to the control system.

Setting radio codes

The table below lists the radio codes, DIP switch positions, and ranges for the TXC4+.

The formula to determine the channel number of a TXC4+ series transmitter is:

$$(\text{Radio code offset}) + (\text{Radio code number multiplied by } 16).$$

Radio Code Offset corresponds to the number of buttons available on the transmitter. Each button containing its own push-channel.

Refer to the TXC4+ Series Radio Code Offsets and Shifts table on page 7 for the TXC4+ series radio code offsets a shift.

TXC4+ Radio Codes, DIP Switch Settings, and Channel Code Ranges											
DIP Switch Positions						Button and Push Channel Numbers					
Radio code	6	7	8	9	10	TXC4+					
						1	1&4	2	3	2&3	4
0.5	ON	OFF	OFF	OFF	OFF	8	14	9	10	11	15
1	OFF	ON	OFF	OFF	OFF	16	22	17	18	19	23
1.5	ON	ON	OFF	OFF	OFF	24	30	25	26	27	31
2	OFF	OFF	ON	OFF	OFF	32	38	33	34	35	39
2.5	ON	OFF	ON	OFF	OFF	40	46	41	42	43	47
3	OFF	ON	ON	OFF	OFF	48	54	49	50	51	55
3.5	ON	ON	ON	OFF	OFF	56	62	57	58	59	63
4	OFF	OFF	OFF	ON	OFF	64	70	65	66	67	71
4.5	ON	OFF	OFF	ON	OFF	72	78	73	74	75	79
5	OFF	ON	OFF	ON	OFF	80	86	81	82	83	87
5.5	ON	ON	OFF	ON	OFF	88	94	89	90	91	95
6	OFF	OFF	ON	ON	OFF	96	102	97	98	99	103
6.5	ON	OFF	ON	ON	OFF	104	110	105	106	107	111
7	OFF	ON	ON	ON	OFF	112	118	113	114	115	119
7.5	ON	ON	ON	ON	OFF	120	126	121	122	123	127
8	OFF	OFF	OFF	OFF	ON	128	134	129	130	131	135
8.5	ON	OFF	OFF	OFF	ON	136	142	137	138	139	143
9	OFF	ON	OFF	OFF	ON	144	150	145	146	147	151
9.5	ON	ON	OFF	OFF	ON	152	158	153	154	155	159
10	OFF	OFF	ON	OFF	ON	160	166	161	162	163	167
10.5	ON	OFF	ON	OFF	ON	168	174	169	170	171	175
11	OFF	ON	ON	OFF	ON	176	182	177	178	179	183
11.5	ON	ON	ON	OFF	ON	184	190	185	186	187	191
12	OFF	OFF	OFF	ON	ON	192	198	193	194	195	199
12.5	ON	OFF	OFF	ON	ON	200	206	201	202	203	207
13	OFF	ON	OFF	ON	ON	208	214	209	210	211	215
13.5	ON	ON	OFF	ON	ON	216	222	217	218	219	223
14	OFF	OFF	ON	ON	ON	224	230	225	226	227	231
14.5	ON	OFF	ON	ON	ON	232	238	233	234	235	239
15	OFF	ON	ON	ON	ON	240	246	241	242	243	247
15.5	ON	ON	ON	ON	ON	248	254	249	250	251	255

Set the TXC16+ and TXC32+ radio code using DIP switch positions 7 through 10, which are accessible when the battery cover is removed.

The formula to determine the channel number of the TXC16+ and TXC32+ is:

$$(\text{Button number} - 1) + (\text{Radio code number multiplied by } 16).$$

TxC4+ Series Radio Code Offsets and Shifts		
Pushbutton	Radio Code Offset	Trigger Button Radio Code Offset Shift
1	0	8
2	1	9
3	2	10
2 & 3	3	11
1 & 4	6	14
4	7	15

The table below lists the radio codes, DIP switch settings, and ranges for the TxC16+ and TxC32+ transmitters.

TxC16+ and TxC32+ Radio Codes, DIP Switch Settings, and Channel Code Ranges								
Radio code	DIP Switch Positions				Channel Code Ranges			
					TxC16+		TxC32+	
	7	8	9	10	From	To	From	To
1	ON	OFF	OFF	OFF	16	31	16	63
2	OFF	ON	OFF	OFF	32	47	32	79
3	ON	ON	OFF	OFF	48	63	48	95
4	OFF	OFF	ON	OFF	64	79	64	111
5	ON	OFF	ON	OFF	80	95	80	127
6	OFF	ON	ON	OFF	96	111	96	143
7	ON	ON	ON	OFF	112	127	112	159
8	OFF	OFF	OFF	ON	128	143	128	175
9	ON	OFF	OFF	ON	144	159	144	191
10	OFF	ON	OFF	ON	160	175	160	207
11	ON	ON	OFF	ON	176	191	176	223
12	OFF	OFF	ON	ON	192	207	192	239
13	ON	OFF	ON	ON	208	223	208	255
14	OFF	ON	ON	ON	224	239	N/A	N/A
15	ON	ON	ON	ON	240	255	N/A	N/A

Trigger switch operation (TxC4+ series only)

The TxC4+ series transmitters have a trigger switch on the front underside of the transmitter (see FIG. 1 on page 1). On the TxC4L+ model, this switch operates the laser pointer. On the TxC4+ model, this switch can be configured in one of two ways:

- Configuration 1 (default): Pushbutton 1** Remove the battery cover and locate position 4 of the DIP switch. If position 4 is in the OFF position, the trigger switch functions exactly like the pushbutton 1 on the topside of the transmitter. To set position 4, move the switch up (ON) or down (OFF).
- Configuration 2: Radio code offset shift** Remove the battery cover and locate position 4 of the DIP switch. Refer to the TxC4+ Series Radio Code Offsets and Shifts table if position 4 is in the ON position, the trigger switch shifts up the radio code offset by 8

(e.g.: add 8 to the radio code offset value to calculate the channel number being transmitted). To set position 4, move the switch up (ON) or down (OFF).

Radiation hazards

Laser beams produce light frequencies that are harmful to the human eye. **DO NOT** look into, or shine a laser beam into another person's eyes. Laser light frequencies can cause retina damage.

Read the following WARNING.

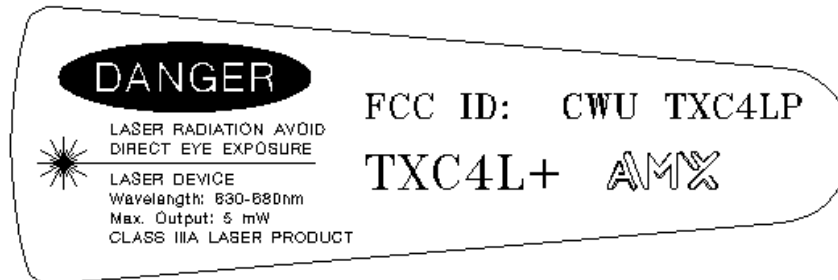


FIG. 6 Laser radiation hazard

Troubleshooting

Read through the troubleshooting information below if you are experiencing a problem with your transmitter. If the problem cannot be resolved, call your AMX dealer.

If the red LED does not flash:

1. Remove the transmitter's battery cover and verify that the batteries are correctly installed.
2. Verify that the batteries are fully charged using a voltage tester. If not, replace the batteries.
3. If the transmission LED does not flash and one of the following conditions is true, return the unit to your AMX dealer for repair:
 - RF system receiver responds correctly when you press a transmitter pushbutton.
 - IR receiver LED lights when you press a transmitter pushbutton.

If the red LED flashes but the AMX system does not respond:

1. Verify that positions 1, 2, and 3 of the DIP switch are set to the correct transmit mode.
2. When using RF mode, verify that position 3 of the DIP switch is ON (up).
3. Verify channel code transmission range (FIG. 5 on page 5) matches the receiving control system's program.
4. Hold the transmitter closer to the IR or RF receiver. If the problem stops, the transmitter signals cannot reach the control system due to high levels of IR or RF interference or weak transmitter batteries.
 - IR interference is typically generated by lights. Try turning off room lights to check for improved performance.
 - RF interference may be caused by electronic devices such as computers, motors, lighting ballasts, wireless microphones, etc. Move or reset the receiver's position.



AMX reserves the right to alter specifications without notice at any time.

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